# RECHARGEABLES

*Operating Instructions*

STREAMLIGHT®

## OPERATING INSTRUCTIONS FOR STREAMLIGHT RECHARGEABLES

Thank you for selecting Streamlight, truly remarkable portable lights. As with any fine instrument, reasonable care and maintenance of this product will provide years of dependable service.

Please read this manual before using your Streamlight. It includes important safety and operating instructions and should be saved. **Flashlight must be charged overnight before first use.**

### SAFETY

A. SAVE THESE INSTRUCTIONS. This manual contains important safety and operating instructions for operating your Streamlight and charger.

B. DO NOT OVERDISCHARGE NICKEL-CADMIUM BATTERIES. Read the instructions under *Care and Use of Nickel-Cadmium Batteries* in this manual.

C. BEFORE USING THE BATTERY CHARGER, READ ALL INSTRUCTIONS AND CAUTIONARY MARKINGS ON THE CHARGER.

D. **CAUTION:** To reduce the risk of fire, electrical shock, or personal injury, DO NOT attempt to use this charger with any other attachment or unit. Likewise, DO NOT attempt to charge the Streamlight with any other charger.

**WARNING:** Never leave your Streamlight with its face against any surface while in operation. The resultant heat build-up can cause a fire.

E. DON'T ABUSE THE CORD. Never carry charger and holder by cord or yank it to disconnect the charger from a receptacle.

F. PLUG CHARGER DIRECTLY INTO AN ELECTRICAL OUTLET. DO NOT use an extension cord.

G. DO NOT OPERATE A DAMAGED CHARGER. Have damaged cords or plugs replaced immediately.

H. REMOVE STREAMLIGHT FROM CHARGER HOLDER BEFORE ATTEMPTING ANY ROUTINE CLEANING OR MAINTENANCE. DO NOT try to repair the unit or charger yourself. Take it to a qualified service facility.

I. DO NOT INCINERATE THE BATTERY, EVEN IF IT IS SEVERELY DAMAGED OR COMPLETELY WORN OUT. The batteries can explode in a fire. Handle the battery stick carefully and never attempt to short circuit.

J. A SMALL LEAKAGE OF LIQUID FROM THE BATTERY CELLS MAY OCCUR UNDER EXTREME USAGE OR TEMPERATURE CONDITIONS. This does not necessarily indicate a failure. However, if the outer case seal is broken and the leakage gets on your skin:
   1) Wash promptly with soap and water.
   2) Neutralize with a mild acid, such as lemon juice or vinegar.
   3) If battery liquid gets into your eyes, flush them with clear water for a minimum of 10 minutes and seek immediate medical attention. (Medical note: The liquid is a 25-35% solution of potassium hydroxide.)

K. DO NOT PUT ANY METAL OBJECTS INTO THE CHARGING TERMINALS LOCATED IN THE CHARGER HOLDER. Although there is no electrical shock hazard, this action could cause a burn injury.

L. Use of this product for other than a lighting device is not recommended. Manufacturer specifically disclaims liability for other than recommended use.

M. Always observe battery polarity. A reversed battery will damage the Streamlight when charging is attempted. Never attempt to charge any batteries other than the nickel-cadmium type battery that is Streamlight original equipment. Recharging alkaline or carbon zinc batteries will damage the light.

### MOUNTING THE CHARGER

The Streamlight charger should never be mounted against any vinyl or heat sensitive surface.
The charger is designed to be mounted in any position up to 90° from vertical and up to six feet from its power source. AC and DC power cords are available. Each of the Streamlight power cords has a molded plug,

which is keyed, and will fit into the charger only one (1) way. Use only approved Streamlight chargers and holders. Decide on a convenient location and make sure there is enough clearance to retrieve the flashlight.

Use the charging sleeve itself as a template and mark the location of the mounting holes with a scribe. Drill the appropriate holes for the hardware you intend to use. The screws provided require 5/64" holes. Mount the charger securely to the mounting surface.

Plug the charger cord into the charger sleeve and then connect the charger to an appropriate power source.

All DC chargers, those with cigarette lighter adapters or unterminated leads, are meant for 12V DC, 15 volts maximum.

Before mounting a Streamlight charger in a vehicle, please read the section, *Installing the DC2 Option*.

## INSTALLING THE DC2 OPTION

The DC2 option is offered for those who would like to permanently mount a Streamlight charger in their vehicle.

**IMPORTANT:** Before making electrical connections in a vehicle, keep in mind that a shorted auto battery can deliver hundreds of amperes, which can easily start a fire. Make all connections with insulated solder joints, lugs, or other devices intended for such use. Be sure that your installation is fused.

Depending on the Streamlight model and the condition of its battery, a Streamlight can draw up to .4 amps, 400 mA. Ordinarily, it is recommended that the light be connected directly to the battery. If your vehicle is used infrequently, i.e., weekly, we suggest that a Streamlight be hooked to an ignition key-switched line to prevent the vehicle battery from discharging.

If you are familiar with a vehicle's electrical system, installing the Streamlight charger can be quite simple. The positive lead (striped) should be connected to the far side of an unswitched fuse holder; this is the side which is dead with fuse removed. The negative lead (unmarked) should be connected to a convenient chassis ground. Some vehicles have an accessory fuse holder. If you install your own fuse, a one amp slow-blow is recommended.

When installing or using the Streamlight flashlight in a vehicle, always be sure that the flashlight case does not touch the chassis while in the charging sleeve. This can result in damage to the flashlight.

## CHARGING

Remember to fully charge before use. Several charge/discharge cycles are necessary to achieve full battery capacity. The Streamlight is designed to be left on charge continuously between uses. This ensures that the light is always ready for use. There is no danger of overcharging the battery. See *Care and Use of Batteries* for additional battery information.

To charge the Streamlight, turn off and insert it into the charger/holder. If the LED's are lit, it indicates that the battery is charging. It takes approximately 12-14 hours for a full charge; 5-6 hours for a 60% charge. In cases where the battery is severely discharged, it may take a few seconds for the LED's to light.

With the proper lamp module installed, the Streamlight should run at least one hour after a full charge.
**NOTE:** Leaving the flashlight on, once the lamp has become dim, can reduce the useful life of the battery.

It is possible to extend the run time with some loss of intensity on an SL-20X or 35X by replacing its lamp module with an SL-20XP or 20X lamp, respectively.

Also, the intensity of the SL-20XP and 20X can be increased at a loss of run time by replacing its lamp module with an SL-20X or 35X lamp module, respectively. For lamp module identification, see the color code list in *Lamp Module Replacement*.

## CARE AND USE OF NICKEL-CADMIUM BATTERIES

Since opinions within the battery manufacturing industry vary concerning the characteristics of nickel-cadmiums, we do not intend to give a complete technical explanation of their operation. We would rather describe as simply as possible how to get the most use from the nickel-cadmium batteries supplied with the Streamlight.

1. Thoroughly read the section in this manual concerning safety procedures and charging the Streamlight.
2. Fully charge before first use.
3. Although the Streamlight is designed to be left on charge continuously, there are exceptions. If the surrounding temperature is below 10°F, continuous charging is not recommended. Additionally, if the light is going to be unused for three months or more, remove from charge.
4. There are special considerations to note when using multi-cell rechargeable nickel-cadmium batteries, such as those found in certain Streamlight flashlights. If a nickel-cadmium battery is subject to repeated and extensive overdeep discharges, such as an aggressive conditioning procedure to eliminate "memory," which runs the battery down completely on a regular basis, it can experience a voltage reversal of one of the five cells. This can cause a build up of pressure inside the cell which could lead to venting of the electrolyte, cell damage and early battery failure. In addition, should the pressure relief vent on the top of the battery stick become damaged, this pressure build up could lead to the cell's bursting and possible injury.
5. To obtain the safest and longest service from your rechargeable products, Streamlight, Inc., in conjunction with the leading manufacturers of nickel-cadmium batteries, offers the following recommendations:
   A. Do not overdischarge nickel-cadmium batteries. Never leave the flashlight on once the lamp becomes dim. Discharging the battery past this point can damage it or shorten its life.
   B. Do not periodically "condition" or "exercise" your flashlight battery despite what you may have been told about nickel-cadmium "memory." According to the most recent reports gained from technical manuals of battery manufacturers, the actual existence of "memory" is extremely unlikely. A regular ritual of deep discharging is specifically not recommended, unnecessary and will greatly shorten battery and lamp life.
   C. If the battery is overdischarged, there may be a small leakage of alkaline electrolyte from the safety vent area on top of the cell. It appears as a white powdery substance and can affect the integrity of the electrical contact. We recommend that your battery be periodically inspected and the contact area wiped clean should any evidence of electrolyte leakage be present. Use caution when handling a battery that has leaked. The electrolyte is a strong caustic and can burn or irritate the skin and eyes.
   D. While inspecting the battery, take note of the condition of the positive terminal cap on the top cell. Some suppliers' batteries are subject to vent damage if this cap is dented, and the battery should be replaced or serviced.

**NOTE:** The rechargeable battery contained in this product is recyclable. At the end of its useful life, under various country and state laws, it may be illegal to dispose of this battery in the municipal solid waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal or call 1-800-822-8837 for locating a drop off site near you.

## LAMP MODULE REPLACEMENT

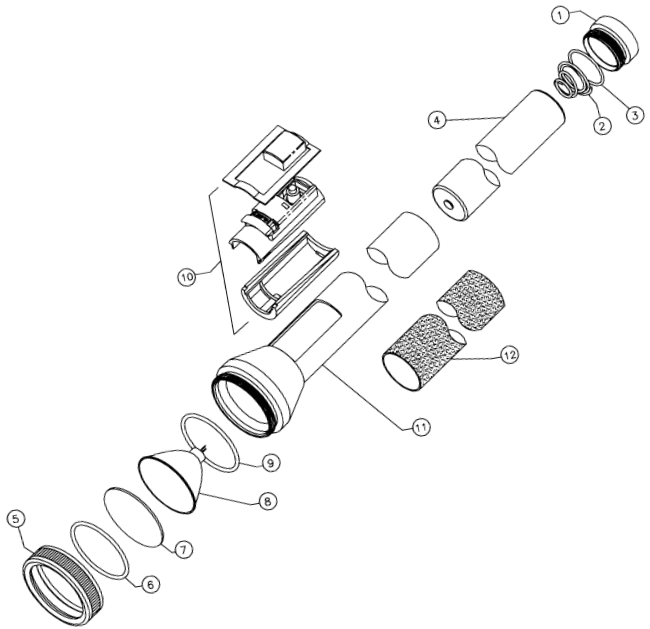
1. Before working on the Streamlight, remove the tail cap and battery.
2. Unscrew and remove face cap to expose lamp module. **NOTE:** One (1) "O" Ring and lens should stay in the face cap as a sub-assembly, unless the lens is to be replaced. One (1) "O" Ring should stay on the flashlight's head.
3. Pull lamp module an inch or so out of the flashlight and disconnect wires by pulling on the connectors, rather than tugging on the wires themselves.
4. Check with the guide below to ensure compatibility of lamp module and flashlight.

   **Lamp Module Identification**
   SL-20XP (8 watt) lamp modules are black color coded, #25107
   SL-20XP (3 watt) lamp modules are blue color coded, #25157
   SL-20X lamp modules are white color coded, #20110
   SL-35X lamp modules are red color coded, #35110
5. Push connectors on to lamp pins; polarity can be disregarded.
6. Place lamp module back into flashlight, taking care not to pinch or twist wires. Before replacing the face cap, it is generally advised that the "O" Ring on the flashlight head be lightly coated with a household lubricant.
7. Replace face cap, battery stick and tail cap. *While screwing the face cap on, try to keep the lamp module from twisting by keeping pressure on the lens*. If the lamp module twists, it will twist the wires behind it. Do not overtighten the face cap and the tail cap of the SL-20XP.
8. Your Streamlight should be ready for use.

**WARNING:** Be sure to use genuine Streamlight replacement parts. Use of another manufacturer's replacement parts could affect product performance.

**Replacement Parts**

| Item | Quantity | Part No. | Description |
|---|---|---|---|
| 1 | 1 | 250003 | Tail Cap, 20XP Black |
| | | 250003-1 | Tail Cap, 20XP Orange |
| | | 250003-2 | Tail Cap, 20XP Yellow |
| | | 201708 | Tail Cap, 20X & 35X |
| 2 | 1 | 250009 | Spring, 20XP Tail Cap |
| | | 201777 | Spring, 20X & 35X Tail Cap |
| 3 | 1 | 250008 | "O" ring, 20XP Tail Cap |
| | | 151706 | "O" ring, 20X & 35X Tail Cap |
| 4 | 1 | 25170 | Battery, 20XP |
| | | 20170 | Battery, 20X |
| 5 | 1 | 250002 | Face Cap, 20XP Black |
| | | 250002-1 | Face Cap, 20XP Orange |
| | | 250002-2 | Face Cap, 20XP Yellow |
| | | 201601 | Face Cap, 20X & 35X |
| 6 | 1 | 201604 | "O" Ring, 20X & 35X Face Cap |
| | | 250005 | "O" Ring, 20XP Face Cap |
| 7 | 1 | 20160 | Lens (all) |
| 8 | 1 | 25107 | Lamp Module, 20XP (8 watt) |
| | | 25157 | Lamp Module, 20XP (3 watt) |
| | | 20110 | Lamp Module, 20X |
| | | 35110 | Lamp Module, 35X |
| 9 | 1 | 201604 | Head "O" Ring (all) |
| 10 | 1 | 25140 | Switch Kit, 20XP |
| | | 20140 | Switch Kit, 20X |
| | | 35140 | Switch Kit, 35X |
| 11 | 1 | 201417 | Head/Barrel Assembly, 20X |
| | | 351417 | Head/Barrel Assembly, 35X |
| | | | Body Assembly, 20XP (includes Body Sleeve, Contact Flange, and Strip) |
| | | 250012 | Body Assembly, 20XP Black |
| | | 250012-1 | Body Assembly, 20XP Orange |
| | | 250012-2 | Body Assembly, 20XP Yellow |
| 12 | 1 | 250006 | Foam Sleeve, 20XP Only |
| Not Shown | – | – | Chargers (all) |
| | | 22052 | Charge Sleeve (all) |
| | | 22311 | 120V AC Charge Cord |
| | | 22051 | DC1 Charge Cord with Lighter Plug |
| | | 22050 | DC2 Charge Cord without Plug |
| | | 21725 | 230V AC Charge Cord |

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| | Length | Weight | Material | Lamp | Battery | Maximum Output | Charge Rate | Continuous Run Time | Charge Time |
|---|---|---|---|---|---|---|---|---|---|
| **SL-20XP** (8 watt) | 13" | 1.0 lbs. | Super Tough Nylon | 6 Volt 8 watt Halogen | 5 Sub 'C' Welded Stick | Up to 25,000 Candlepower | 180 mA | 1.5 hours | 12-14 hours |
| **SL-20XP** (3 watt) | 13" | 1.0 lbs. | Super Tough Nylon | 6 Volt 3 watt Halogen | 5 Sub 'C' Welded Stick | Up to 8,000 Candlepower | 180 mA | 3.75 hours | 12-14 hours |
| **SL-20X** | 13" | 1.8 lbs. | Aircraft Aluminum | 6 Volt 10 watt Halogen | 5 "1/2D" Welded Stick | Up to 30,000 Candlepower | 220 mA | 1.5 hours | 12-14 hours |
| **SL-35X** | 17" | 2.8 lbs. | Aircraft Aluminum | 6 Volt 20 watt Halogen | 5 "D" Welded Stick | Up to 40,000 Candlepower | 400 mA | 1.5 hours | 12-14 hours |

*MANUFACTURER*
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**IMPORTANT** – Be sure to use genuine **Streamlight** replacement parts.

**WARRANTY REGISTRATION:** To register the warranty on your Streamlight, complete the card enclosed and mail to Streamlight, Inc., within ten (10) days of purchase. When returning product for warranty repairs, please provide receipt or other proof of purchase.

**PRODUCT USE:** The Streamlights are intended for use as high intensity, heavy duty, rechargeable, portable light sources. Use of the Streamlights for any purpose other than light sources is specifically discouraged by the manufacturer.

The rechargeable battery contained in this product is recyclable. At the end of its useful life, under various country and state laws, it may be illegal to dispose of this battery in the municipal solid waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

**WARRANTY STREAMLIGHT SL-20XP™, SL-20X™, SL-35X™**
Streamlight makes no express warranties other than those expressly provided herein. Streamlight does not make, and hereby expressly disclaims, any implied warranties, including warranties of merchantability or fitness for a particular purpose, except to the extent that implied warranties may not be disclaimed under applicable law. To the extent any such implied warranties may not be disclaimed under applicable law, the duration of such implied warranties shall be limited to the minimum period required by applicable law. Streamlight's responsibility under all warranties, both expressed and implied, shall be limited to the repair, replacement or refund of the purchase price of any products covered by such warranty. Streamlight shall, in no event, be liable for any other damages, including consequential or incidental damages. Some jurisdictions my not allow the waiver of or limitations on the scope or duration of implied or expressed warranties or on the exclusion of consequential or incidental damages, in which case the above waivers, limitations or exclusion may not apply to you.

**Money Back Guarantee**
Your Streamlight is unconditionally guaranteed to perform to your satisfaction or your money will be refunded, provided you return your Streamlight to the seller (shipping charges prepaid) within ten (10) days of purchase, along with receipt or any proof of purchase for full refund.

**Warranty Registration Card**
Complete and return Warranty Registration Card within ten (10) days of purchase to register your warranty. Retain your receipt or any proof of purchase. Failure to return the Warranty Card as required will invalidate the warranty and service coverages described herein.

**Warranty**
Your Streamlight, including case and all internal components, but excluding lamp, battery, foam sleeve and charger / holder, has a Limited Lifetime Warranty from date of purchase. In any country or jurisdiction where specific limitations are placed on limited lifetime warranties, Streamlight will honor a 10-Year Limited Warranty. Should your Streamlight fail to operate, return it (shipping charges prepaid) to the factory or Authorized Service Center at the address listed with these instructions, along with your proof of purchase and, if you have owned your Streamlight for more than (1) year, $5.00 for handling. Streamlight will repair or replace the warranted defective parts without cost and return the unit to you (shipping charges prepaid within the Continental USA) or, at Streamlight's option, if permitted by law, Streamlight will refund your purchase price.

**Limitations on Warranty and Service Coverage**
1. Warranty is invalid if, in Streamlight's sole opinion, there has been tampering, alteration, abuse, misuse, or failure to follow proper care and maintenance procedures.
2. This warranty shall not extend to repairs by anyone other than Streamlight or other than service facilities designated by Streamlight.
3. This warranty is limited to the original user-purchaser as such appears on the Warranty Registration Card.

**Lamp Warranty**
The Lamp Module is warranted for a period of six (6) months in accordance with the above terms.

**Battery Stick, Foam Sleeve and Charger Holder Warranty**
The Battery Stick, Foam Sleeve and Charger Holder are warranted for a period of one (1) year in accordance with the above terms.

Serial #_____ Date of Purchase _____

This warranty gives you specific legal rights and you may also have other rights.

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